

ATTORNEY DOCKET NO.: 2006579-0155**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

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| Applicant: | Yang et al. | Examiner: | Nguyen, Dustin |
| Serial No.: | 09/866,375 | Art Unit: | 2154 |
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| Title: | Remote Control of a Client's Off-Screen Surface | | |

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APPEAL BRIEF

Mail Stop Appeal Brief – Patents
Commissioner for Patents
P.O. Box 1450
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Sir:

In support of the Notice of Appeal filed on April 20, 2006, appealing the final rejection of all claims in the above-identified application, Appellants provide the following reasons that the rejection is improper. Appellants respectfully request the Board of Patent Appeals and Interferences to reverse the Examiner's final rejection of the claimed subject matter and to remand the claims back to the Examiner with instructions to allow the claims.

i. Real Party in Interest

The real party in interest in the above-identified application is Citrix Systems, Inc.

ii. **Related Appeals and Interferences**

No other appeals or interferences are known to Appellants, the Appellants' legal representative, or assignee that will directly affect, be directly affected by, or have a bearing on the Board's decision in the pending appeal.

iii. **Status of Claims**

Claims 1-20 are pending and rejected in the application.

Claims 1-20 are on appeal and are set forth in Appendix A.

iv. **Status of Amendments**

No amendment was filed subsequent to final rejection mailed on January 27, 2006.

v. **Summary of the Claimed Subject Matter**

As defined by the claims on appeal, Appellants' invention relates to controlling, by a server, the creation of a client's off-screen surface. A software program executes on a client and receives instructions from a server. The server instructs the client to select a memory region of the client for the off-screen surface and to copy graphical data transmitted by the server to a location within the memory region. *See* claims 1 and 12. Appellants provide the following concise explanation of the subject matter defined in independent claims 1 and 12.

Claim 1 recites a method of remotely controlling, by a server, the formation of an off-screen surface at a client coupled to the server via a communications network, the method being performed at the server. *See* claim 1; FIG. 1, FIG. 4; and Page 42, paragraph [0068], lines 8-16. The server agent instructs the client to select a first memory region for allocation to the off-screen surface and the first memory region corresponds to a memory coupled to the client. *See* claim 1; FIG. 1, FIG. 4, FIG. 11; Page 9, paragraph [0017], lines 3-9; Page 14, paragraph [0023] lines 4-10; Page 24, paragraph [0040], lines 14-17; Page 42, paragraph [0069], lines 20-22; and Page 43, paragraph [0071], lines 20-22. The server agent transmits

indicia of a graphical data to the client. *See* claim 1; FIG. 1, FIG. 4, FIG. 11; Page 9, paragraph [0017], lines 9-10; Page 15, paragraph [0027], lines 17-22; Page 24, paragraph [0040], line 21; and Page 44, paragraph [0071], lines 3-5. The server agent also instructs the client to copy the graphical data associated with the indicia to a particular location within the first memory region. *See* claim 1; FIG. 1, FIG. 4, and FIG. 11; Page 9, paragraph [0017], lines 10-13; Page 24, paragraph [0040], line 22 through Page 25, line 6; Page 42, paragraph [0069], line 22 through Page 43, line 4; and Page 44, paragraph [0071], lines 5-7.

Claim 12 recites a system for remotely controlling, by a server, the formation of an off-screen surface at a client coupled to the server via a communications network. *See* claim 12; FIG. 1, FIG. 4; and FIG. 11; and Page 42, paragraph [0068], lines 8-16. The system includes a client agent executing on the client. *See* claim 12; FIG. 1, FIG. 4, and FIG. 11; Page 13, paragraph [0023], line 21 through Page 14 lines 1-10. The system also includes a first memory region coupled to the client agent. *See* claim 12, FIG. 1, FIG. 4, FIG. 11; Page 9, paragraph [0017], lines 3-9; Page 14, paragraph [0023] lines 4-10; Page 24, paragraph [0040], lines 14-17; Page 42, paragraph [0069], lines 20-22; and Page 43, paragraph [0071], lines 20-22. The system comprises an off-screen surface stored within the first memory region. *See* claim 12, FIG. 1, and FIG. 4; Page 9, paragraph [0017], lines 3-9; Page 24, paragraph [0040], lines 14-17; Page 42, paragraph [0069], lines 20-22; and Page 43, paragraph [0071], lines 20-22. The system further includes a server agent executing on the server and coupled to the client agent. *See* claim 12, FIG. 1, and FIG. 4; Page 9, paragraph [0017], lines 3-5; Page 14, paragraph [0024], lines 13-16. Also, the system includes graphical data that has an associated indicia and is stored by the client. *See* claim 12; FIG. 4; Page 23, paragraph [0038], lines 14-22; Page 24, paragraph [0040] line 14 through Page 25, line 6.

The server agent transmits indicia of the graphical data to the client agent. *See* claim 12, FIG. 1, FIG. 4, FIG. 11; Page 9, paragraph [0017], lines 9-10; Page 15, paragraph [0027], lines 17-22; Page 24, paragraph [0040], line 21; and Page 44, paragraph [0071], lines 3-5.

The server agent also instructs the client to select the first memory region for allocation to the off-screen surface and to copy the graphical data associated with the indicia to a particular location within the first memory region. *See* claim 12; FIG. 1, FIG. 4, and FIG. 11; Page 9, paragraph [0017], lines 10-13.

vi. **Grounds of Rejection to be Reviewed on Appeal**

Appellants present the following issues for review:

(1) Whether claims 1, 2, 4-9, 12, and 14-18 are obvious over United States Patent No. 6,073,192 to Clapp *et al.* (“Clapp”) in view of United States Patent No. 6,483,515 to Hanko (“Hanko”) when the combination of Clapp and Hanko fails to teach each and every element of the claimed invention and is improper because any such hypothetical combination would change the principle of operation of the references; and,

(2) Whether claims 3, 10, 11, 13, 19, and 20 are obvious over and United States Patent No. 6,073,192 to Clapp *et al.* (“Clapp”) in view of United States Patent No. 6,484,515 to Hanko (“Hanko”) and in further view of United States Patent Application No. 2003/0084052 to Peterson (“Peterson”) when the combination of Clapp, Hanko, and Petersons fails to teach each and every element of the claimed invention and is improper because any such hypothetical combination would change the principle of operation of the references.

vii. **Arguments**

Appellants believe that the following arguments address each of the issues presented for appeal.

Claims 1, 2, 4-9, 12, and 14-18 are not obvious over Clapp and Hanko because any hypothetical combinations of Clapp and Hanko fail to establish a *prima facie* case of obviousness.

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art as modified or combined, must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in Appellants' disclosure. See *In re Vaack*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991); see also MPEP §2142.

The initial burden is on the Examiner to provide some suggestion of the desirability of doing what the inventor has done. "To support the conclusion that the claimed invention is directed to obvious subject matter, either the references must expressly or impliedly suggest the claimed invention or the examiner must present a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references." See *Ex parte Clapp*, 227 USPQ 972, 973 (BPAI 1985); see also MPEP §2142.

Summary of Clapp

Clapp discusses a peripheral video conferencing system that communicates via analog and digital communication channels for transmitting video, audio, and other information from either a local or remote conferencing site. Clapp discusses that the peripheral audio/visual conferencing system operates in cooperation with a host computer system and visual conferencing application software to provide window sharing and document collaboration

functions which may be initiated at either a local or remote conferencing site (see Clapp FIGS. 11 and 12).

The local host computer copies screen data to an off-screen buffer (Col. 11, lines 33-41):

The user, at step 628, then selects a local active application window 602 from the menu 600 for sharing with a remote conferencing site. The local host computer system 244, at step 630, preferably allocates an appropriate amount of system memory to accommodate a local off-screen window buffer 604 and a local pixel update table 606. A copy of the pixels or pixel data defining the local active window 602 is transferred to the local off-screen window buffer at step 632.

The local host computer transmits the contents of its off-screen buffer to the remote host computer (Col. 11, line 65 – Col. 12, line 1, Col. 12, lines 11-17):

At an appropriate time, the pixel data residing in the local off-screen window buffer 604 is transferred to the local audio/visual communication system 242 for transmission over the communication channel 82 at step 644.

After establishing a communication link between the local and remote host computer systems 244 and 264, a full update of pixel data associated with the video image of the entire local active window 602 as reflected in the local off-screen window buffer 604 is initially transmitted over the communication channel 82 and received by the remote audio/visual communication system 262 at step 650.

The remote host computer copies the local host computer off-screen buffer contents to its off-screen buffer (Col. 12, lines 17-22):

The pixel data associated with the entire local active window 602 is first copied to the remote off-screen window buffer 610 at step 652, and subsequently transferred at step 654 to the remote active window 608 presented in the foreground of the remote display 268.

Summary of Hanko

Hanko is generally directed to updating a display device to fill a display area on the display device with a tiled pattern including repetitions of a tile image data stored at a host system interconnected to a remote system via a communication link. To achieve this result, the Hanko system transmits an image from a service computer system to a Human Interface

Device (“HID”), which copies and replicates the image into an on-screen frame buffer to provide a background image on the HID.

The HID receives a single tile image and stores the tile image in an on-screen buffer (Col. 4, lines 59-64):

The HID 321 receives the display information and generates the tile pattern by performing steps including storing the tile image data starting at a location in an on-screen frame buffer corresponding to a coordinate location within the display area relative to said display area 602 (step 618).

The HID replicates the tile image in the on-screen frame buffer to provide the background image of the HID (Col. 4, lines 64-67):

copying the tile image data into the frame buffer based on the replication information until the portion of the display area 602 is filled with a tiled pattern (step 620).

Any hypothetical combination of Clapp and Hanko fails to teach, suggest, or disclose each and every element of Appellants claimed invention.

Appellants respectfully submit that the Examiner has failed to make a prima facie case of obviousness because the prior art references do not teach or suggest all the claim limitations. *See In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974).

Any hypothetical combination of Clapp and Hanko fails to disclose, teach, or suggest a server instructing a client to select a first memory region for allocation to an off-screen surface.

In Clapp, there is no positive instruction transmitted from the local computer to the remote computer. Said another way, the local computer is not controlling the remote computer. While the local computer provides data to the remote computer, this is not the same as controlling the remote computer by issuing one or more instructions to the remote computer.

More specifically, Clapp is silent as to transmitting an instruction from the local computer to the remote computer that instructs the remote computer to select a first memory

region of the client as an off-screen surface. This is not surprising because Clapp recites a peripheral video conferencing system is present at both a local and a remote conferencing site and communicates with a respective host computer system. Neither of the peripheral video conferencing system at the local or at the remote conferencing sites instructs the other to do anything because, in order to permit document sharing and collaboration each of the peripheral video conferencing system needs to be able to operate independent of control of the other. As such, Clapp does not teach a server that instructs the client to select a first memory region for allocation to an off-screen surface.

Hanko fails to cure this deficiency of Clapp. As shown above, Hanko teaches that the HID does not copy the tile image into an off-screen surface. Instead, the HID copies and replicates the tile image into an on-screen buffer. In fact, Hanko goes to lengths in the background section of the patent to discourage the use of an off-screen surface.

Therefore, any hypothetical combination of Clapp and Hanko fails to disclose, teach, or suggest a server instructing a client to select a first memory region for allocation to an off-screen surface.

Any hypothetical combination of Clapp and Hanko fails to disclose, teach, or suggest a server instructing a client to copy the graphical data associated with the indicia to a particular location within the first memory region.

Again, the claimed invention recites the server instructing the client to perform an action. Specifically, the action is to copy the graphical data associated with the indicia to a particular location within the first memory region. As discussed above, Clapp fails to disclose, teach or suggest a server instructing a client. Therefore, Clapp does not teach the specific instruction as recited in the claims.

Further, since the first memory region represents the off-screen surface Hanko the arguments present with respect to Hanko are equally applicable here. That is, Hanko is

limited to dealing with an on-screen buffer and not an off-screen surface, as required by the claimed invention.

There is no motivation to modify the teachings of Clapp and Hanko because such a combination would change the principle of operation of Clapp and Hanko.

Appellants respectfully submit that the Examiner has failed to make a prima facie case of obviousness for a second reason: there is no suggestion or motivation, either in the cited reference or in the knowledge generally available to one of ordinary skill in the art, to modify the Clapp and Hanko references as suggested by the Examiner since the proposed modification changes the principle of operation of Clapp and Hanko. *See In re Ratti*, 270 F.2d 810, 123 USPQ 349 (CCPA 1959).

Appellants argument with respect to the improper nature of the combination can be stated simply as Hanko teaches away from using an off-screen surface. As previously explained to the Examiner, Hanko states in the Background of the patent that:

Computer systems can display a variety of data on a display. Often, the background layer of a display shows a pattern that a user can select. Often these backgrounds are generated by repeating a single tile to fill the display area. For example, Internet web pages with textured background are usually rendered as a tile pattern. Existing rendering methods require the use of off-screen memory to store the tile pattern. The tile pattern is then transferred to on-screen memory for display. However, in some computer systems, the display devices may not include any off-screen memory. As such, the entire background comprised of multiple instances of the tile pattern needs to be transmitted for display on the terminal. However, transmitting the entire tile pattern is time consuming and wastes valuable computational time and resources.

As such, the combination of Hanko and Clapp is improper because **Hanko teaches away from using off-screen surfaces while Clapp teach using off-screen surfaces** and any such a combination of Clapp and Hanko changes the principle of operation of each of the references.

It is well established and known in the art that off-screen surfaces and on-screen buffers are substantially different in their operation and function. The two types of items are not interchangeable without changing the principle of operation of the device incorporating the buffers. Given that the background section of Hanko describes the failings of using an off-screen buffer to display the tile image immediately, not copying the tile image to an off-screen buffer and then transferring the tile pattern to an on-screen buffer, the combination is improper, since Hanko teaches away the techniques taught by Clapp.

Appellants, therefore, respectfully submit that there is no suggestion or motivation, either in the cited reference or in the knowledge generally available to one of ordinary skill in the art, to modify Clapp or Hanko in the manner suggested by the Examiner. As such, the Examiner has failed to establish a *prima facie* case of obviousness. Applicants request, for at least these reasons, that the rejection of claims 1, 2, 4-9, 12, and 14-18 under 35 U.S.C. §103 be reversed.

**Claims 3, 10, 11, 13, 19, and 20 are not obvious over
Clapp, Hanko, and Peterson because any hypothetical combinations of
Clapp, Hanko, and Peterson fail to establish a *prima facie* case of obviousness.**

Appellants respectfully submit that claims 3, 10, 11, 13, 19, and 20 depend from allowable base claims and recite further limitations thereon. As such, the Appellants will not argue their individual patentability and rest on the arguments present above with respect to independent claims 1 and 12.

vii. CONCLUSION

In light of the foregoing arguments, Appellants submit that pending claims 1-20 are patentable when compared to the prior art of record and respectfully requests that the Board reverse the Examiner's final rejection of claims 1-20.

Respectfully submitted,
CHOATE, HALL & STEWART, LLP

Dated: June 1, 2007

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CLAIM Appendix

1. (original) A method of remotely controlling, by a server, the formation of an off-screen surface at a client coupled to the server via a communications network, the method being performed at the server and comprising the steps of:

instructing the client to select a first memory region for allocation to the off-screen surface, the first memory region corresponding to a memory coupled to the client;

transmitting indicia of a graphical data to the client; and

instructing the client to copy the graphical data associated with the indicia to a particular location within the first memory region.

2. (original) The method of claim 1 further comprising the step of:

specifying a plurality of attributes associated with the off-screen surface.

3. (original) The method of claim 1 wherein the indicia of the graphical data corresponds to a fuzzy key, the fuzzy key identifying a location of the graphical data within a persistent storage memory coupled to the client.

4. (original) The method of claim 1 wherein the indicia of the graphical data corresponds to an index, the index identifying a location of the graphical data within a cache memory coupled to the client.

5. (original) The method of claim 1 further comprising the step of:

instructing the client to update an on-screen surface associated with the client using the copied graphical data in the off-screen surface.

6. (original) The method of claim 1 further comprising the step of:

storing a duplicate of the off-screen surface in a memory coupled to the server.

7. (original) The method of claim 6 further comprising the steps of:

upon receiving an indication of an error condition, transmitting at least one portion of the duplicate off-screen surface to the client; and

instructing the client to copy the at least one portion of the duplicate off-screen surface to an on-screen surface associated with the client.

8. (original) The method of claim 1 further comprising the steps of:

- a) instructing the client to select a second memory region; and
- b) instructing the client to copy the graphical data to a particular location

within the second memory region,

wherein step a) is performed in response to receiving an indication of an error condition.

9. (original) The method of claim 1 wherein the graphical data corresponds to a bitmap.

10. (original) The method of claim 1 wherein the graphical data corresponds to a glyph.

11. (original) The method of claim 1 wherein the graphical data corresponds to a strip.

12. (previously presented) A system for remotely controlling, by a server, the formation of an off-screen surface at a client coupled to the server via a communications network, the system comprising:

a client agent executing on the client;

a first memory region coupled to the client agent;

an off-screen surface stored within the first memory region;

a server agent executing on the server and coupled to the client agent; and

a graphical data, the graphical data having associated indicia and being stored by the client, wherein the server agent

transmits indicia of the graphical data to the client agent, and

instructs the client to select the first memory region for allocation to the off-screen surface and to copy the graphical data associated with the indicia to a particular location within the first memory region.

13. (original) The system of claim 12 wherein the indicia of the graphical data corresponds to a fuzzy key, the fuzzy key identifying a location of the graphical data within a persistent storage memory coupled to the client.

14. (original) The system of claim 12 wherein the indicia of the graphical data corresponds to an index, the index identifying a location of the graphical data within a cache memory coupled to the client.

15. (original) The system of claim 12 wherein attributes of the off-screen surface are specified by the server agent.

16. (original) The system of claim 12 further comprising a duplicate of the off-screen surface stored in a memory coupled to the server agent.

17. (original) The system of claim 16 further comprising:

an on-screen surface coupled to the client agent, the client agent updating the on-screen surface using the duplicate off-screen surface and discarding the off-screen surface stored within the first memory region upon the occurrence of an error condition.

18. (original) The system of claim 12 wherein the graphical data corresponds to a bitmap.

19. (original) The system of claim 12 wherein the graphical data corresponds to a glyph.

20. (original) The system of claim 12 wherein the graphical data corresponds to a strip.

EVIDENCE Appendix

Not applicable to this appeal.

RELATED PROCEEDINGS Appendix

Not applicable to this appeal.